

ENTR 6041-6042 New Product Design and Business Development Executive Summary

CARLSON SCHOOL
OF MANAGEMENT
UNIVERSITY OF MINNESOTA

Courses and Credits:

ENTR 6041 Initiating New Product Design & Business Development (4 credits, fall)

ENTR 6042 Implementing New Product Design & Business Development (4 credits, spring)

MBA students may take the course for either the Fall (as ENTR 6041 for 4 credits) or the Spring (as ENTR 6042 for 4 credits) or for both terms (8 credits).

Prerequisites: MBA Student

Description

New Product Design and Business Development is a graduate level course jointly offered by the Carlson School of Management, the Department of Mechanical Engineering and the Department of Biomedical Engineering. A team of approximately six students (1/2 engineering, 1/2 business), along with a faculty coach and a company representative, work together over nine months to develop a working prototype product and business plan for the sponsoring company. Products are real and are taken through launch by the sponsoring companies. Each project addresses market feasibility (what is the need and do customers want the product), technical feasibility (engineering design, prototyping, and manufacture), and financial feasibility (how much money will the company make). The overall objectives of the course is to (1) train product development leaders and (2) return value to the sponsoring company.

Objectives

Fall Semester: Discovery

1. Understand the context: Research the disease state, existing solutions, competing products and the relevant technology. Use secondary market research to define market trends.
2. Discover needs: Conduct customer interviews, develop a needs statement. Initiate a product requirements document.
3. Ideate: Create one or more concepts that satisfy the need. Execute a rough working prototype of each concept.
4. Assess: Initial screen for market, technical and financial feasibility.

Spring Semester: Execution

1. Validate the concept: Gather customer reactions to the concept. Conduct preliminary engineering bench tests of the prototypes. Select the concept to execute.
2. Develop the concept: Finalize the detailed product requirements. Finalize the detailed engineering design. Fabricate, assemble and bench test an alpha prototype. Gather customer reactions to the prototype. Create a manufacturing plan. Protect the intellectual property.
3. Develop the business plan: Use the Canvas model to solidify the value proposition,

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customer segment, distribution channel, cost structure and revenue stream.

4. Assess: Final screen for market, technical and financial feasibility.

5. Create the hand-off plan for the client to continue execution.

Learning Outcomes

- Ability to work with engineering or science specialists and business management teams
- Ability to define and achieve both short and long term technical and business goals
- Understanding the proven steps necessary to produce a viable product
- Understanding the difference between a plan on paper and the reality of a rapidly evolving technical product market